TOSHIBA TD62771AP

TOSHIBA BIPOLAR DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

# TD62771AP

# 7CH HIGH-VOLTAGE SOURCE DRIVER

The TD62771AP is comprised of seven source current Transistor Array.

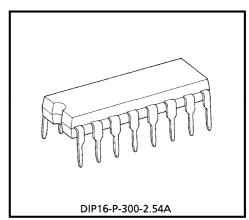
This driver is specifically designed for fluorescent display applications.

Applications include relay, hammer and lamp drivers.

### **FEATURES**

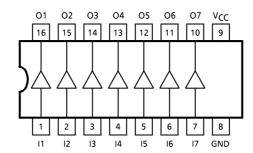
- High output voltage
  V<sub>CC</sub> = 60V MIN.
- Output current (single output)
  I<sub>OUT</sub> = −50mA MIN.
- Input compatible with TTL. 5V CMOS
- Pull-down resistors/each output
- Single supply voltage
- Package Type-AP : DIP-16pin

CHARACTERISTIC	DESIGNATION				
TD62771AP	TTL, 5V CMOS				

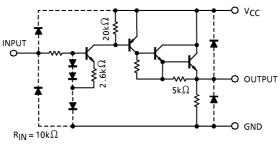


Weight: 1.11g (Typ.)

#### PIN CONNECTION (TOP VIEW)



## **SCHEMATICS** (EACH DRIVER)



(Note) The input and output parasitic diodes cannot be used as clamp diodes.

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### **MAXIMUM RATINGS** (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub>	60	V
Output Voltage	Vout	Vcc	V
Output Current	lout	- 50	mA / ch
Input Voltage	VIN	20	V
Power Dissipation	P <sub>D</sub> (Note)	1.47	W
Operating Temperature	T <sub>opr</sub>	- 40~85	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

(Note) Delated above 25°C in the proportion of 11.7mW/°C

# **RECOMMENDED OPERATING CONDITIONS** ( $Ta = -40 \sim 85$ °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage	Vcc	_	4.5	_	55	V
Output Voltage	Vout	_	0	_	VCC	V
Output Current	IOUT	_	0	_	- 40	mA / ch
Input Voltage	VIN	_	0	_	7	V
Power Dissipation	PD		_	_	0.52	W

# **ELECTRICAL CHARACTERISTICS** (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CIR- CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Voltage	"H" Level	$V_{IH}$	1	_	2.0	_	_	V
	"L" Level	$V_{IL}$	1	_	0	_	0.8	
Input Current	"H" Level	lΗ	2	_	_	40	75	μΑ
Output Current	"L" Level	lOL	3	V <sub>IN</sub> = 2.4V	_	200	_	μΑ
Output Voltage	"H" Level	Vон	4	I <sub>OUT</sub> = -40mA V <sub>IN</sub> = V <sub>IH</sub> MIN.	V <sub>C</sub> C - 2.5	V <sub>CC</sub> – 1.7	_	V
	"L" Level	VOL		I <sub>OUT</sub> = 0, V <sub>IN</sub> = V <sub>IL</sub> MAX.	_	50	250	mV
Supply Current		ICC (ON)	1	$V_{CC} = 55V$ , $V_{IN} = V_{IH}$ MIN.	_		20	mA
		ICC (OFF)		$V_{CC} = 55V$ , $V_{IN} = V_{IL} MAX$ .	_		1	
Turn-On Delay		ton	5	$V_{CC} = 55V, C_L = 15pF$	_	0.2	_	$\mu$ s
Turn-Off Delay		<sup>t</sup> OFF			_	6.0	_	μs

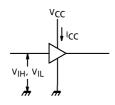
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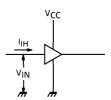
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#### **TEST CIRCUIT**

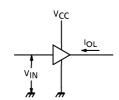
1. VIH, VIL, ICC



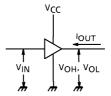
2. I<sub>IH</sub>



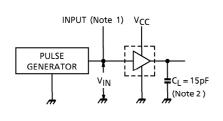
3. IOL

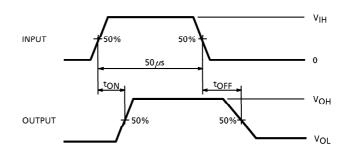


4. V<sub>OH</sub>, V<sub>OL</sub>



5. ton, toff

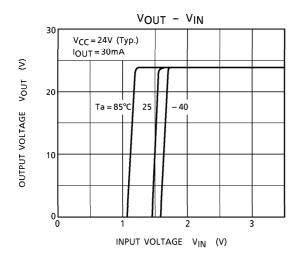


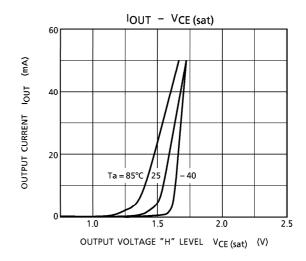


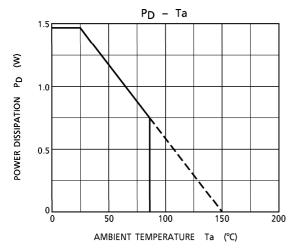
- (Note 1) Pulse width 50 $\mu$ s, duty cycle 10% Output impedance 50 $\Omega$ ,  $t_{\rm f}$  = 100ns,  $t_{\rm f}$  = 100ns
- (Note 2) C<sub>L</sub> includes probe and jig capacitance

### PRECAUTIONS for USING

Utmost care is necessary in the design of the output line,  $V_{CC}$  and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

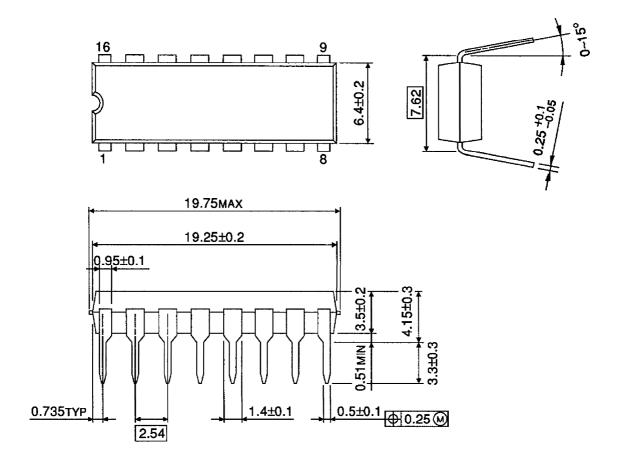






# OUTLINE DRAWING DIP16-P-300-2.54A

Unit: mm



Weight: 1.11g (Typ.)